

April 2003  
Preliminary Draft  
Not for Quotation

## **What's in a Name? The Value of Naming Rights**

Eva Marikova Leeds  
Department of Economics  
Moravian College  
Email: [meeml01@moravian.edu](mailto:meeml01@moravian.edu)

Michael A. Leeds  
Department of Economics  
Temple University  
Email: [mleeds@sbm.temple.edu](mailto:mleeds@sbm.temple.edu)

Irina Pistolet  
Department of Economics  
Temple University  
Email: [ipistole@astro.temple.edu](mailto:ipistole@astro.temple.edu)

## **I. Introduction**

Economists and the popular media have devoted a great deal of attention to how and why cities fund athletic facilities for professional sports franchises. The studies uniformly declare that teams reap large profits, at least in the short run. While the popular press is divided as to the value of new facilities to cities, economists unanimously conclude that cities get almost no financial return on their investment in the teams they host.<sup>1</sup> In contrast, there have been no serious studies of the investment made by private firms in naming rights for stadiums and arenas. The lack of attention is surprising because of the spate of recent bankruptcies of firms that had purchased naming rights to facilities. While one cannot attribute Enron's problems to its dealings with the Houston Astros, the widespread failures of firms that had purchased naming rights suggest that one should take a careful look at the value of naming rights to the firms that purchase them.

We fill this gap in the literature by performing an event study on the stock price of 19 firms that recently purchased naming rights. If investors believe that the purchase of naming rights makes economic sense, then the return to holders of the company's stock should rise when the purchase is announced (or when the purchase becomes public knowledge). We find, however, that no such increase in stock price occurs. We conclude that purchases of naming rights have little value in the eyes of investors and are probably of little financial value to the companies that buy them.

---

<sup>1</sup> See Coates and Humphreys (1999), Hudson (1999), Noll and Zimbalist (1997) and Rosentraub (1997) for some recent examples. Danielson (1997) and Swindell and Rosentraub (1998) provide examples of non-financial benefits to cities.

In the next section of this paper, we provide a brief background into naming rights and the reasons that companies give for purchasing them. In the third section we briefly review event studies. In the fourth section, we discuss the data and analysis used in this paper. In the fifth section, we present results. A conclusion follows.

## **II. Naming Rights**

The names on professional sports facilities have changed over the years to reflect the sources of funds used to build (or refurbish) them.<sup>2</sup> In the first half of the 20<sup>th</sup> century, facilities generally bore the names of the team owners (uniformly in baseball) who had the ballparks built for their teams. Comiskey Park, Forbes Field, and Shibe Park, all built in the first two decades of the 20<sup>th</sup> century, are examples of stadiums named for team owners. As cities began to assume more of the financial burden of building facilities in the 1960s, names began to assume place names (e.g., Atlanta-Fulton County Stadium), reflect local flavor (e.g., Three Rivers Stadium in Pittsburgh) or express patriotic themes (e.g., Veterans Stadium in Philadelphia).

As the cost of building facilities and operating franchises escalated, teams began to seek additional sources of funds. This increasingly assumed the form of selling a firm the right to put its name on the stadium or arena. Naming rights often provided additional benefits. For example, Lincoln Financial's recent purchase of naming rights for the Philadelphia Eagles' new facility also gives it "commercial time on broadcasts, signs and information kiosks at the stadium, and suites at home and road games in which to entertain clients." (Bowen, 2002)

---

<sup>2</sup> For a more complete treatment see Leeds and von Allmen (2002)

Despite the expense, \$139.6 million over 20 years, Lincoln Financial officials believe the purchase makes good business sense for the company. (Bowen, 2002) Recent events suggest, however, that naming rights may not deliver as much of a return as Lincoln Financial officials expect. Table I shows that several firms that purchased naming rights have had to relinquish those rights due to bankruptcy or have failed to renew the rights due to financial losses. In addition to these companies, several other corporate sponsors have retained their deals despite severe financial distress. For example, Ericsson, Reliant Resources, and American and Continental Airlines all lost at least 70 percent of their stock value in 2002. While the difficulties faced by corporate sponsors do not prove that naming rights are a bad deal, the fact that companies that own naming rights agreements had stock declines in 2002 more than twice that of the Dow Jones Industrial Average has led some pundits to refer to “the stadium sponsorship curse”<sup>3</sup> and suggests that further investigation is warranted.

### **III. Event Studies**

Event-study analysis examines the impact of an exogenous event on the value of a group of firms. More specifically, it examines whether the event has permanently changed the rate of return on the firms’ stock. To find out whether a change has occurred, one must create a counterfactual history. One must posit the returns that would have prevailed without the event and then determine whether these returns vary systematically from those actually observed. This suggests that the analysis proceed broadly in four steps: (For greater detail, see MacKinlay, 1997.)

---

<sup>3</sup> Isidore (2003)

First, one must establish when the event in question took place and what firms to examine. Sometimes, the date is obvious, as in the case of a disaster (see Nethercutt and Pruitt). At other times it is not at all obvious, as in case of a regulatory change that takes a long time to be adopted.

Next, one must decide how much data to collect and what frequency to choose. Most studies use daily data. Specifically, the researcher must determine the length of both the pre-event time period, or *estimation window*, and the *event window*, during which the event could be affecting the rate of return on the stock. These two periods do not overlap. For example, one could use 100 days of data for estimation and 30 days of data surrounding the event. (This choice has been rather arbitrary in the literature.)

Third, to create the counterfactual, “normal” rate of return, the researcher must choose an appropriate model. The choices are typically either the constant mean return model or the market model. Both of these methods are described below.

Fourth, the researcher calculates and analyzes the abnormal rate of return, defined as the difference between the observed and normal rate of return. One calculates daily t-statistics and uses the distribution of the abnormal and cumulative rates of return (again, described below)—under the null hypothesis that the event had no effect—to determine whether the abnormal and cumulative rates of return are systematically and persistently different from zero.

Just as capital market theory spans economics and finance, so does event analysis. Eugene Fama and his collaborators developed the methodology in the late 1960s as part

of their research on financial market efficiency. In the pioneering study, Fama, Fisher, Jensen, and Roll determined that stock split announcements did not affect the value of a stock relative to the market (Fama, 1969). The methodology has been used in finance to examine a variety of events. For example, MacKinlay (1997) studies the effect of earnings announcements (as well as a brief history of this methodology) on the rate of return to stocks. Aharony and Swary (1980) examine the effect of dividend announcements on the value of the stock and find that dividends affect the value of the stock beyond the earnings effect.

#### **IV. Data and Framework**

We gathered the information on the stock prices of nineteen publicly traded companies that purchased the naming rights to athletic facilities. The sample is limited because our methodology required that we use publicly held companies whose purchase of naming rights – in particular, the date on which they purchased the rights – was well documented. The names of the companies, the cities and teams in which the facilities were built, and the year in which the companies bought naming rights appear in Table II. We found the precise date on which naming rights were purchased on team websites. We then downloaded opening and closing stock prices for these companies for 135 days prior to the announcement of naming rights and for 25 days after the deal had been announced. Since trading in the company's stock could have taken place on the day of the announcement, we regarded the day of the announcement as the first day after the announcement. If the announcement took place on a weekend, we counted the next trading day as the first day after the announcement. We calculated the holding period

rate of return ( $r$ ), the rate of return for the stock that is held for the entire trading day, for each day as:

$$r = \frac{P_c - P_o}{P_o} - 1, \quad (1)$$

where  $P_c$  is the stock's closing price and  $P_o$  is its opening price. Data on stock prices were taken from the *Yahoo!* financial web site.

Because event studies look for abnormal returns to a company's stock, one must first compute the "normal" return. Most event analyses formulate the base-line "normal" return to the company's stock in one of two ways. The constant mean return model assumes that the normal return is a fixed value. Alternatively, the market model predicts the normal return for a particular firm follows the movement of a market-wide index. We performed separate analyses for each assumption.

If a firm's return follows the constant mean model, then the best prediction of its holding period return is the average return in the days before the event. For each company,  $j$ , we computed the average holding period return ( $\bar{r}_j$ ) for the 120-day period ending 15 trading days before the announcement.<sup>4</sup> As is standard for event studies, we stopped prior to the announcement date because of the possibility that word of the deal had leaked out and that the stock price had already capitalized the value of the purchase prior to the formal announcement. We computed the abnormal return to the company's stock by subtracting

---

<sup>4</sup> This is subject to the same caveat about announcements made on weekends.

the average return calculated above from the holding period return for each day of the forty-day period starting 15 trading days before the announcement and ending 25 days after it.

$$r_A = r_j - \bar{r}_j \quad (2)$$

We thus computed 40 values of  $r_A$  for each of the 19 firms in our study.

Because the abnormal returns may reinforce one another over time, event studies typically look at the cumulative abnormal return (CAR). The CAR on any given day is simply the sum of the abnormal for that day and all previous days in the period under consideration. The CAR for firm  $i$  from date  $t_0$  date  $t_1$  is given by

$$CAR_i(t_0, t_1) = \sum_{s=t_0}^{t_1} r_{is}$$

where  $t_0$  is the date of the event and  $t_1$  is the date at which we are measuring the CAR. We then used the average CAR for each day by computing the arithmetic mean over the 19 firms. For example, we compute the average abnormal return  $t_1$  days after the announcement of naming rights is:

$$\overline{CAR}(t_0, t_1) = \frac{1}{N} \sum_{i=1}^N CAR_i(t_0, t_1) \quad (3)$$

$N$  is the number of firms. Under the null hypothesis that the announcement of the naming rights has no effect on the return to holding the stock of the sponsor, the average CAR follows a  $t$ -distribution with  $N$  degrees of freedom. The second and third columns of Table III contain the average CAR and  $t$ -statistic for each date using the constant mean return model technique.

While studies seem to show that the constant return model and the market return model yield similar results, we also accounted for the possibility that the normal return moves with the broader market. To do so, we regressed the holding period returns for each firm on the holding period returns for the Standard and Poors 500 Index for the period ending 15 days prior to the naming rights announcement ( $r_{SP}$ ). We then used the regression results to generate “normal” values of  $r$  for each of the 15 days preceding the announcement and the 25 days following it:

$$\hat{r} = \hat{\beta}_0 + \hat{\beta}_1 r_{SP} \quad (4)$$

We compute the abnormal return as the difference:

$$r_A = r - \hat{r} \quad (5)$$

We then followed similar procedures to those outlined for the constant mean model to compute the average cumulative abnormal return and  $t$ -statistics for each of the 15 days before and 25 days after the naming rights deal was announced.

The average cumulative abnormal returns and their t-values appear in the fourth and fifth columns of Table III. Figures 1 and 2 illustrate the results in the second and fourth columns in Table III for both specifications of  $r_h$ .

## V. Results

The results in Table III show no evidence for the claim that naming rights boost a firm's profitability. Of the 40 observations of the average cumulative abnormal return for the constant mean method, only five are statistically significant at the 10 percent level, and only one of these is significant at 5 percent. Moreover, the results are generally negative, with all the statistically significant results being negative. When one uses the market return method, the results are pretty much the same. Five of the observations are statistically significant at the 10 percent level. Of these, only one observation is positive.<sup>5</sup>

Figures 1 and 2 show that the week following the announcement (days 16-20) is the only week with generally (though not uniformly) positive abnormal returns. However, these returns are generally not statistically significant.

When aggregated across firms, insignificant and negative measures for the CAR could reflect the disproportionate impact of a few firms. While space prevents presenting the CARs for all 40 days for all 19 firms, Table IV summarizes these results. These results show that the aggregate pattern seems to hold for individual firms as well. Even at the

---

<sup>5</sup> The significant, positive return came for day 20 using the S&P 500 calculation.

individual firm level, most CARs are not statistically significant, particularly for the market return model. Moreover, most of the statistically significant results are negative. Only Edison Field shows any pattern of positive results, and these came between 3 and 2 weeks prior to the announcement, hardly a strong indication of investor confidence. For all its optimistic claims, Lincoln Financial actually showed the strongest negative CAR of any firm in the sample, with 15 dates showing statistically significant, negative cumulative abnormal returns.

## **VI. Conclusion**

The public announcements that accompany naming rights deals regularly describe them as savvy investments. They claim that the added visibility the deal provides the firm will add to its profitability. The recent spate of bankruptcies of companies with naming rights deals – and the poor market performance of many of the companies that remained solvent – suggests that some other motivation may be at work.

Our findings confirm that the purchase of naming rights does not add to a company's profitability. This finding does not seem to be restricted to the dot-com companies that bought many naming rights in the late 1990s, only to crash with the bursting of the tech bubble in the early 2000s. In fact, the most recent purchase of naming rights in the sample, Lincoln Financial's purchase of rights for the Philadelphia Eagles' new facility, has the most consistently negative impact. As a stable, financial services company, Lincoln Financial hardly fits the stereotype of the high-tech companies that spent so freely in the 1990s. More likely, the negative reaction comes from the fact that Lincoln

Financial's purchase reversed several years of declining prices for naming rights. We suspect that investors recognized this overpayment and responded accordingly.

## Sources

- Bowen, Les. "Deal in Works for 2 Years," at [http://www.philly.com/mlb/philly/sports/football/nfl/philadelphia\\_eagles/3389366.htm](http://www.philly.com/mlb/philly/sports/football/nfl/philadelphia_eagles/3389366.htm)
- Aharony, Joseph, and Itzhak Swary, "Quarterly Dividend and Earnings Announcements and Stockholders' Returns: An Empirical Analysis," *The Journal of Finance*, 35 (1980) pp. 1-12.
- Coates, Dennis and Brad Humphreys. "The Growth Effects of Sports Franchises, Stadia, and Arenas," *Journal of Policy Analysis and Management*, Fall 1999, vol. 18, no. 4, pp. 601-624.
- Danielson, Michael, *Home Team: Professional Sport and the American Metropolis*, Princeton: Princeton University Press, 1997.
- Fama, Eugene F. et al., "The Adjustment of Stock Prices to New Information." *International Economic Review*, February 1969, 20(2), pp. 1-21.
- Hudson, Ian. "Bright Lights, Big City: Do Professional Sports Teams Increase Employment?" *Journal of Urban Affairs*, v. 21, no. 4, 1999, pp. 397-407.
- Isidore, Chris. "Stadium Curse Still Haunts Firms," *CNNmoney* at [http://money.cnn.com/2003/01/03/commentary/column\\_sportsbiz/sponsor\\_stock\\_index/](http://money.cnn.com/2003/01/03/commentary/column_sportsbiz/sponsor_stock_index/), January 3, 2003
- Leeds, Michael and Peter von Allmen. *The Economics of Sports*, Boston: Addison-Wesley, 2002.
- MacKinlay, A. Craig. "Event Studies in Economics and Finance," *Journal of Economic Literature*, vol. XXXV, March 1997, pp. 13-39.
- Nethercutt, Leonard L., and Stephen W. Pruitt, "Touched by Tragedy: Capital Market Lessons from the Crash of ValuJet Flight 592," *Economics Letters*, 56 (1997) 351-358.
- Noll, Roger and Andrew Zimbalist, eds. *Sports, Jobs, and Taxes*, Washington, DC: Brookings Institution Press, 1997.
- Rosentraub, Mark. *Major League Losers*, New York: Basic Books, 1997.
- Swindell, David and Mark Rosentraub. "Who Benefits from the Presence of Professional Sports Teams? The Implications for Public Funding of Stadiums and Arenas," *Public Administration Review*, v. 58, no. 1, January 1998, pp. 11-20.

<b>Table I Facilities and Troubled Sponsors</b>		
<i>Facility</i>	<i>City</i>	<i>Difficulty</i>
Trans World Dome	St. Louis	Bankruptcy
Enron Field	Houston	Bankruptcy
CMGI Field	Boston	Gave up Name due to Financial Distress
PSINet	Baltimore	Bankruptcy
3-Com Field	San Francisco	Gave up Name due to Financial Distress
ProPlayer Stadium	Miami	Bankruptcy
Adelphia Coliseum	Nashville	Bankruptcy
United Center	Chicago	Bankruptcy
MCI Center	Washington, DC	WorldCom Bankruptcy <sup>a</sup>
US Airways Arena	Landover, MD	Bankruptcy
National Car Rental Arena	Miami	ANC Bankruptcy <sup>a</sup>
Conseco Fieldhouse	Indianapolis	Bankruptcy

<sup>a</sup> *Parent Company*

<b>Table II Facilities Used in Study</b>			
Company	Facility Name	Team	Year built
SBC Communications Inc.	SBC Center	San Antonio Spurs	2002
Safeco Corp.	Safeco Field	Seattle Mariners	1999
Reliant Energy Inc.	Reliant Stadium	Houston Texans	2002
Raymond James Financial Inc.	Raymond James Stadium	Tampa Bay Buccaneers	1998
PNC Bank	PNC Park	Pittsburgh Pirates	2001
Mellon Financial Corp.	Mellon Arena	Pittsburgh Penguins	1999*
Lincoln Financial	Lincoln Financial Field	Philadelphia Eagles	2003
H. J. Heinz Co.	Heinz Field	Pittsburgh Steelers	2001
Gaylord Entertainment Corp.	Gaylord Entertainment Center	Nashville Predators	1997
Cinergy Corp.	Cinergy Field	Cincinnati Reds	1970
Gillette	Gillette Stadium	New England Patriots	2002
CMGI Investments Inc.	CMGI Field	New England Patriots	2002
Edison International	Edison International Field	Anaheim Angels	1997**
Comerica Bank	Comerica Park	Detroit Tigers	2000
Corel Corp.	Corel Centre	Ottawa Senators	1996
Federal Express Corp.	FedEx Field	Washington Redskins	1997
Ford Motor Co.	Ford Field	Detroit Lions	2002
Great American Insurance Corp.	Great American Ballpark	Cincinnati Reds	2003
Savvis Communication Corp.	Savvis	Saint Louis Blues	2000***

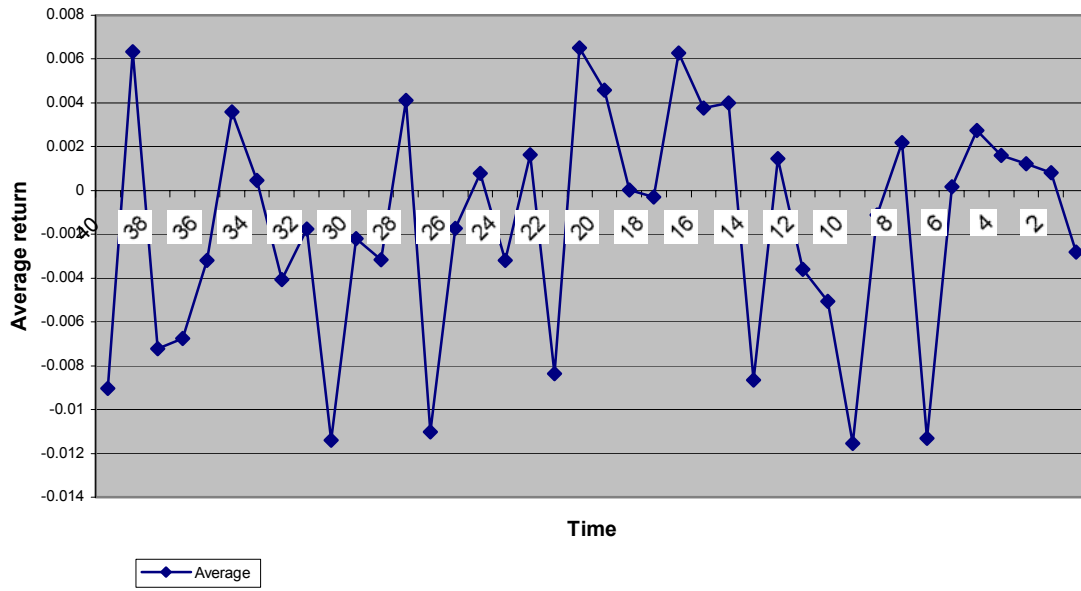
*\*Facility built in 1961. Rights bought in 1999.*

*\*\*Facility built in 1966. Rights bought in 1997.*

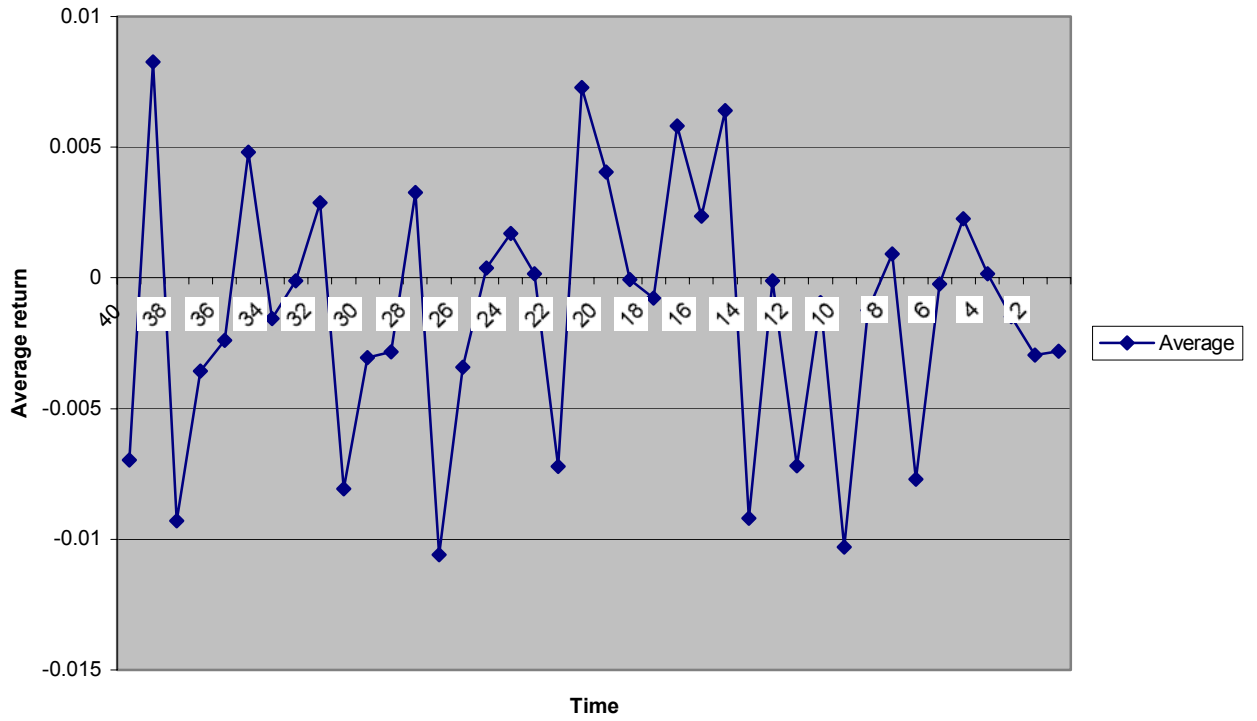
*\*\*\*Facility built in 1994. Rights bought in 2000.*

Table III Average Cumulative Abnormal Returns				
Day	Mean	t-value	Regression	t-value
25	-0.009	-1.052	-0.007	-0.834
24	0.006	0.742	0.008	1.009
23	-0.006	-0.814	-0.009	-1.542
22	-0.007	-1.616	-0.004	-0.888
21	-0.005	-1.164	-0.002	-0.578
20	0.004	1.253	0.005	1.651
19	-0.001	-0.122	-0.002	-0.255
18	-0.003	-0.358	0.000	-0.016
17	-0.001	-0.182	0.003	0.491
16	-0.012	-1.356	-0.008	-0.885
15	-0.002	-0.469	-0.003	-0.716
14	-0.004	-0.909	-0.003	-0.533
13	0.004	1.105	0.003	0.875
12	-0.010	-1.680	-0.011	-1.714
11	-0.001	-0.145	-0.003	-0.623
10	-0.001	-0.398	0.000	0.111
9	-0.001	-0.148	0.002	0.219
8	0.000	0.014	0.000	0.041
7	-0.006	-1.474	-0.007	-1.587
6	0.004	0.429	0.007	0.820
5	0.006	1.508	0.004	1.153
4	0.002	0.528	0.000	-0.015
3	0.000	-0.071	-0.001	-0.162
2	0.005	0.351	0.006	0.404
1	0.007	0.714	0.002	0.270
1	0.002	0.434	0.006	1.220
2	-0.008	-1.717	-0.009	-2.477
3	-0.003	-0.655	0.000	-0.038
4	0.001	0.133	-0.007	-1.428
5	-0.007	-1.661	-0.001	-0.201
6	-0.010	-1.839	-0.010	-1.794
7	-0.001	-0.280	-0.001	-0.366
8	0.001	0.179	0.001	0.154
9	-0.013	-3.371	-0.008	-1.709
10	0.000	0.011	0.000	-0.032
11	0.006	1.013	0.002	0.447
12	0.001	0.219	0.000	0.027
13	-0.001	-0.304	-0.001	-0.335
14	0.000	0.039	-0.003	-0.477
15	-0.001	-0.192	-0.003	-0.624
Before				
After				
**Significance				
* Marg. Sig.				

### Average Cumulative Abnormal Return Results for Constant Mean Return



Average Cumulative Abnormal Returns:  
Results of regression analysis



Stadium Name	Constant Mean		Market Return	
	# Significant CARs	Date of Occurrence*	# Significant CARs	Date of Occurrence
SBC	1	After: 1	0	N/A
Safeco	6	Before: 15,14,13, 11; After: 14,15	0	N/A
Reliant	10	Before: 15-06	0	N/A
Raymond	1	After: 25	0	N/A
PNC	10	Before: 15-07 After: 7	0	N/A
Mellon	1	After: 25	0	N/A
Lincoln	15	After: 4-11, 14-17, 22, 23, 25	0	N/A
Heinz	1	Before: 15	0	N/A
Gaylord	0	N/A	0	N/A
CINergy	0	N/A	0	N/A
Edison	5	Before: 15,13,12,10,9 (+)	1	Before: 15 (+)
CMGI	2	Before: 15,14 (+)	0	N/A
Comerica	0	N/A	0	N/A
Corel	3	Before: 15-13	0	N/A
FedEx	1	Before: 15	0	N/A
Ford	0	N/A	0	N/A
Gillette	1	Before: 10 (+)	0	N/A
Great American	4	Before: 15-12	0	N/A
Savvis	0	N/A	0	N/A

\*CAR is negative unless noted by “+”

